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IS 8331 (2003): Textiles - Angola Shirting [TXD 4: Wool and Wool Products]



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“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक

वस्त्रादि — अंगोला शर्टिंग — विशिष्ट

(दूसरा पुनरीक्षण)

Indian Standard

TEXTILES — ANGOLA SHIRTING —
SPECIFICATION

(*Second Revision*)

ICS 59.080.20; 61.020

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR RD.
NEW DELHI 110002

June 2003

FOREWORD

This Indian Standard (Second Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Wool and Wool Products Including Floor Coverings Sectional Committee had been approved by the Textile Division Council.

This standard was first published in 1976 and subsequently revised in 1993. It is again being revised to include Angola shirting made of blends of wool and viscose.

The composition of the Committee responsible for formulation of this standard is given in Annex B.

For the purpose of deciding whether a particular requirement of this standard is complied with the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

AMENDMENT NO. 2 MARCH 2006
TO
IS 8331 : 2003 TEXTILES — ANGOLA SHIRTING —
SPECIFICATION

(Second Revision)

(Page 1, Title)— Substitute 'ANGOLA' for 'ANGLOA'

[Page 2, Table 3, Sl No. (ii), under col heading 2]— Substitute '15.0 cm x 20.0 cm' for '5.0 cm x 20.0 cm'

(TX 04)

AMENDMENT NO. 1 OCTOBER 2004
TO
IS 8331 : 2003 TEXTILES — ANGOLA SHIRTING —
SPECIFICATION
(Second Revision)

[Page 2, clause 5.2, Table 3, Sl No. (i)] — Substitute the following for the existing:

Table 3 Requirements of Angola Shirting
(Clause 5.2)

Sl No.	Characteristic	Requirement		Method of Test
		Type I	Type II	
(1)	(2)	(3)	(4)	(4)
i)	Blend composition:			IS 2006
	a) Wool, percent	35 ± 2	50 ± 2	
	b) Polyester, percent	65 ± 2	—	
	c) Viscose, percent	—	50 ± 2	

(TX 04)

Indian Standard

TEXTILES — ANGLOA SHIRTING — SPECIFICATION

(Second Revision)

1 SCOPE

1.1 This standard prescribes the constructional particulars and other requirements of two types of angloa shirting as under:

Type I Angola shirting made of blends of wool and polyester

Type II Angola shirting made of blends of wool and viscose

1.2 This standard does not specify the indeterminable characteristics like general appearance, feel, finish and shade of cloth, etc (*see also* 6).

2 REFERENCES

The Indian Standards listed in Annex A contain provisions which through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated in Annex A.

3 TERMINOLOGY

For the purpose of this standard, the definitions as given in IS 11206 shall apply.

4 MANUFACTURE

4.1 The cloth shall be manufactured from yarn made of wool blended with polyester or viscose. The particulars regarding the grade of wool, polyester fibre and count of yarn are given in Table 1. The approximate count of warp and weft yarns is given for guidance only.

4.2 Cloth

The cloth shall be clean, scoured and free from grease, soap, filling or any other admixture which might give fictitious mass, substance or firmness. The cloth shall be uniformly woven with firm selvages.

4.2.1 Moth Proofing

If required by the buyer, the cloth shall be rendered moth proof by suitable chemicals as per the methods specified in IS 11662.

**Table 1 Manufacturing Particulars of
Angloa Shirting**
(Clause 4.1)

Fineness/Grade of Wool Top (see Note)	Linear Density of Polyester and Viscose Fibre	Approximate Count of Basic Yarn [Universal Count (Metric Count)]		Method of Dyeing
		Warp	Weft	
(1)	(2)	(3)	(4)	(5)
64s	3 denier	25 tex × 2 (Nm 40/2)	25 tex × 2 (Nm 40/2)	Stock dyeing or piece dyeing
Method of Test, Ref to IS 5911 IS 10014 <-----IS 681-----> — (Part 2)				

NOTE — When the fibres removed from the fabric are used for determining fineness grade, the value observed may fall in the next coarser grade, that is, 62s.

4.2.2 Freedom from Defects

The cloth when visually examined both against light and on a surface shall not have more than one objectionable flaw per 8 m length. The objectionable flaws (*see* IS 4125) shall be those which strike immediately the eyes of the person examining the cloth and shall be deemed to include the following:

- a) Missing ends and picks;
- b) Floats;
- c) Cuts and holes;
- d) Stains;
- e) Weft bars and warp section marks;
- f) Big slubs, knots and specks;
- g) Dyeing defects (streaks, patches, etc); and
- h) Thick and thin places.

4.2.3 All objectionable flaws shall be marked by means of a thread sewn in the selvedge opposite the flaw, and an allowance of 10 cm shall be given for each such flaw. Only one selvedge shall be used for tagging.

4.2.4 Dyeing before bleaching

shade of fibres being blended shall match each other so as to achieve a solid drab shade. The shade shall match the shade of the sealed sample as agreed to between the buyer and the seller (see 6).

5 REQUIREMENTS

5.1 The constructional particulars of the cloth shall conform to those given in Table 2.

Table 2 Constructional Particulars of Angola Shirting

Type	Ends/ dm	Picks/ dm	Mass	Length, Min	Width (Exclusive of Selvedges), Min	Weave
			g/m ²	m	cm	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
I	220	190	260	40 or as agreed	152 or as agreed	2/2 Twill
II	210	200	235	do	do	do
Tolerance, percent	+5	+5	+5	—	—	—
Method of Test, Ref to	IS 1963	IS 1963	IS 1964	IS 1954	IS 1954	Visual

5.2 The other requirements of cloth shall conform to those given in Table 3.

6 SEALED SAMPLE

6.1 If, in order to illustrate or specify the general appearance, feel, shade and finish, etc., of cloth, a sample has been agreed upon and sealed, the supply shall be in conformity with the sample in such respects.

6.1.1 The custody of the sealed sample shall be a matter of prior agreement between the buyer and the seller.

7 MARKING

7.1 The cloth shall be marked with the following:

- Name and type of the material,
- Blend composition,
- Indication of the source of manufacture,
- Month and year of manufacture, and
- Length and width of the piece.

7.1.1 BIS Certification Marking

The cloth may also be marked with the Standard Mark.

7.1.1.1 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which the license for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

**Table 3 Requirements of Angola Shirting
(Clause 5.2)**

SI No.	Characteristic	Requirement		Method of Test, Ref to
		Type I	Type II	
(1)	(2)	(3)	(4)	(5)
i)	Blend composition:			IS 2006
	a) Wool, percent	35±2	50±2	
	b) Polyester, percent	65±2	50±2	
ii)	Average breaking strength (Revelled strip method, on 5.0 cm × 20.0 cm), Min. N (kgf) ¹⁾ :			IS 1969
	a) Warp	2000(204)	1175(120)	
	b) Weft	2000(204)	1175(120)	
iii)	Relaxation shrinkage, percent, Max:			IS 665
	a) Warp way	1.0	5.0	
	b) Weft way	1.0	4.0	
iv)	Colour fastness to: (In case of dyed cloth)			
	a) Light (see Note)	<-----5 or better----->		IS 686 or IS 2454 IS 3361
	b) Washing: Test 2			
	1) Change in colour of the test specimen	<-----4 or better----->		
	2) Staining on adjacent fabric	<-----4 or better----->		
	c) Dry-cleaning:			IS 4802
	1) Change in colour of the test specimen	<-----4 or better----->		
	2) Staining of the solvent	<-----4 or better----->		
	d) Perspiration:			IS 971
	1) Change in colour of the test specimen:			
	1) Acidic	<-----4 or better----->		
	2) Alkaline	<-----4 or better----->		
	2) Staining on adjacent fabric:			
	1) Acidic	<-----4 or better----->		
	2) Alkaline	<-----4 or better----->		
	e) Rubbing:			IS 766
	Change in colour of rubbing cloth:			
	1) Dry rubbing	<-----4 or better----->		
	2) Wet rubbing	<-----4 or better----->		
v)	Pilling resistance	<-----4 or better----->		IS 10971
vi)	pH value of aqueous extract (Cold Method)	<-----5.0 to 7.0----->		IS 1390

NOTE — In case of dispute, colour fastness to light shall be determined by the method prescribed in IS 686.

¹⁾ 1N = 0.102 kgf (approximately).

8 PACKING

8.1 The cloth shall be packed in bales or cases in conformity with the procedure laid down either in IS 32 or in IS 741 as required.

8.2 Alternatively, the cloth may also be packed according to details given in when specifically agreed to between the buyer and the seller.

8.2.1 Each piece of cloth shall be suitably folded in a rectangular form or wrapped on cardboard or straw board of suitable size and thickness. Each piece shall then be wrapped with polyethylene film of a minimum 50 microns thickness or alternatively high density polyethylene film of minimum 25 microns thickness or polypropylene film of minimum 38 microns thickness. The edges of the film shall be properly sealed. Each piece may be tied with a twine at least at 2 places. Such pieces, in a suitable number, shall then be covered in polyethylene film, high modulus, high density polyethylene film or polypropylene film in an outer layer of heavy jute cloth (*see* IS 3751) to form compact bales. The bales shall be made secure by cross hooping the steel strips at right angles to both the length and the width of the bale. The gross mass of the bale shall not normally exceed 40 kg.

9 SAMPLING

9.1 Lot

The quantity of cloth of same type delivered to one buyer against one despatch note shall constitute a lot.

9.2 The conformity of a lot to the requirements of the standard shall be determined on the basis of the tests carried out on the sample selected from the lot.

9.3 Unless otherwise agreed to between the buyer and the seller, the number of pieces to be selected at random shall be in accordance with col 1 and 2 of Table 4. To ensure randomness of selection procedure given in IS 4905 may be followed.

9.4 Criteria for conformity for the acceptance of a lot shall be as specified in Table 5.

Table 4 Sample Size and Criteria for Conformity
(Clause 9.3)

Sl No.	Lot Size	Sample Size	Permissible Number of Non-Conforming Pieces	Sub-sample Size
(1)	(2)	(3)	(4)	(5)
i)	Up to 5	2	0	1
ii)	6 to 20	3	0	1
iii)	21 to 50	5	0	2
iv)	51 to 150	8	0	3
v)	151 to 300	13	1	5
vi)	301 and above	20	1	5

Table 5 Criteria for Conformity
(Clause 9.4)

Sl No.	Characteristic	Number of Tests	Criteria for Conformity
(1)	(2)	(3)	(4)
i)	Ends/dm, picks/dm, mass(g/m ²) width, visual defects and weave	According to col 2 of Table 4	Permissible number of non-conforming pieces not to exceed the corresponding number given in col 3 of Table 4.
ii)	Length	According to col 2 of Table 4	Length of each piece not to measure less than the specified declared or marked length.
iii)	Breaking strength	According to col 4 of Table 4	$\bar{X} - 0.4 R \geq$ specified value
iv)	Relaxation shrinkage	do	$\bar{X} + 0.4 R \leq$ specified value
v)	Blend composition, colour fastness ratings, moth proofing (If applicable) pilling resistance and pH value of aqueous extract	do	All the test specimens to satisfy the relevant requirements specified.

NOTE
 $\bar{X}$ = average value obtained by dividing the sum of the observed values by the number of test results, and
 R = range, that is, difference between the maximum and minimum in a set of observed values.

ANNEX A

(Clause 2)

LIST OF REFERRED INDIAN STANDARDS

<i>IS No.</i>	<i>Title</i>	<i>IS No.</i>	<i>Title</i>
32 : 1971	Code for seaworthy packaging of woollen and worsted yarn and cloth (<i>second revision</i>)	1969 : 1985	Methods for determination of breaking load and elongation of woven textile fabrics (<i>second revision</i>)
665 : 1989	Textiles — Determination of dimensional changes of fabrics containing wool on soaking in water (<i>first revision</i>)	2006 : 1988	Methods for quantitative chemical analysis of binary mixtures of protein fibres and certain other non-protein fibres (<i>second revision</i>)
681 : 1964	Methods for determination of universal count of woollen and worsted yarn	2454 : 1985	Method for determination of colour fastness of textile materials to artificial light (Xenon lamp) (<i>first revision</i>)
686 : 1985	Method for determination of colour fastness of textile materials to daylight (<i>first revision</i>)	3361 : 1979	Method for determination of colour fastness of textile materials to washing : Test 2 (<i>first revision</i>)
741 : 1971	Code for inland packaging of woollen and worsted yarn and cloth (<i>first revision</i>)	3751 : 1993	Textiles — Heavy cee cloth — Specification (<i>first revision</i>)
766 : 1988	Method for determination of colour fastness of textile materials to rubbing (<i>first revision</i>)	4125 : 1987	Glossary of terms pertaining to defects in fabrics (<i>first revision</i>)
971 : 1983	Method for determination of colour fastness of textile materials to perspiration (<i>first revision</i>)	4802 : 1988	Method for determination of colour fastness of textile materials to dry-cleaning (<i>first revision</i>)
1390 : 1983	Methods for determination of pH value of aqueous extracts of textile materials (<i>first revision</i>)	4905 : 1968	Methods for random sampling
1954 : 1990	Determination of length and width of woven fabrics — Methods (<i>second revision</i>)	5911 : 1977	Fineness grades of wool tops (<i>first revision</i>)
1963 : 1981	Methods for determination of threads per unit length in woven fabrics (<i>second revision</i>)	10014 (Part 2) : 1981	Methods of test for man made staple fibres: Part 2 Determination of linear density
1964 : 2001	Textiles — Methods for determination of mass per unit length and mass per unit area of fabrics (<i>second revision</i>)	10971 : 1984	Method for determination of pilling resistance of fabrics
		11206 : 1984	Glossary of textile terms — Wool and other animal fibres, their processing and products
		11662 : 1986	Specification for preservative treatments of textiles

ANNEX B

(Foreword)

COMMITTEE COMPOSITION

Wool and Wool Products Including Floor Coverings Sectional Committee, TX 04

<i>Organization</i>	<i>Representative(s)</i>
Raymond Woollen Mills Ltd, Thane	DR G. S. SINGH (<i>Chairman</i>)
All India Woollen Shoddy Mills Association, Panipat	SHRI S. K. AGGARWAL
Amritsar Swadeshi Woollen Mills, Mumbai	SHRI RAJIV KHANNA
BIRLA VXL India Ltd, (Digjam Woollen Mills), Jamnagar	SHRI S. C. AGARWAL
	SHRI Y. KALRA (<i>Alternate</i>)
Bikaner Woollen Mills, Bikaner	SHRI JAI CHAND LAL BOTHRA
Central Sheep & Wool Research Institute (ICAR), Avikanagar, Bikaner	SHRI P. C. PATNI
	DR S. PARATHASARATHY (<i>Alternate</i>)
Deepak Woollen Mills Ltd, Mumbai	SHRI SURENDRA GOEL
Directorate of Industries, Government of Punjab, Chandigarh	SENIOR TECHNICAL OFFICER SENIOR TECHNICAL OFFICER (<i>Alternate</i>)
Directorate of Marketing & Inspection, Faridabad	DEPUTY AGRICULTURAL MARKETING ADVISOR
Directorate General of Supplies & Disposals (Inspection Wing), New Delhi	SHRI SUNDER LAL
	SHRI SAMIRON ROY (<i>Alternate</i>)
International Wool Secretariat, New Delhi	DR S. K. CHAUDHURI SHRI ARINDAM SAHA (<i>Alternate</i>)
Ministry of Defence (R&D), New Delhi	SHRI S. C. JAIN SHRI R. INDUSHEKAR (<i>Alternate</i>)
Ministry of Defence (DGQA), New Delhi	SHRI N. K. DHIR SHRI A. CHOUDHARY (<i>Alternate</i>)
Modern Woollen Mills Ltd, Alwar	SHRI M. L. PAMECHA
Office of the Textile Commissioner, Mumbai	SHRI S. P. GHOSAL SHRI S. CHAKRABARTY (<i>Alternate</i>)
Shri Dinesh Mills Ltd, Vadodara	SHRI S. K. TANDON SHRI S. C. TANDON (<i>Alternate</i>)
Swastika Woollen Mills, Panipat	SHRI G. D. MAHAJAN SHRI ROHIT MAHAJAN (<i>Alternate</i>)
Sheep & Wool Department, Government of Rajasthan, Jaipur	DR V. K. PATHAK
Textiles Committee, Mumbai	SHRI P. K. MANDAL SHRI B. H. GOPALAKRISHNA (<i>Alternate</i>)
Voluntary Organisation in Interest of Consumer Education (VOICE), New Delhi	DR V. D. DUDEJA
Wool & Woollens Export Promotion Council, Mumbai	SHRIMATI CHITKALA ZUTSHI SHRI ASHOK K. MADHRA (<i>Alternate</i>)
Wool Research Association, Thane	DR (SHRIMATI) S. PATWARDHAN SHRIMATI G. P. RANE (<i>Alternate</i>)
Woolworth India Ltd, Kolkata	SHRI B. L. JAIN SHRI NAVEEN GUPTA (<i>Alternate</i>)
BIS Directorate General	SHRI M. S. VERMA, Director and Head (Tex) [Representing Director General (<i>Ex-officio</i>)]

Member Secretary

SHRI B. L. BHARTI
Joint Director (Tex), BIS

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Amendments Issued Since Publication

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